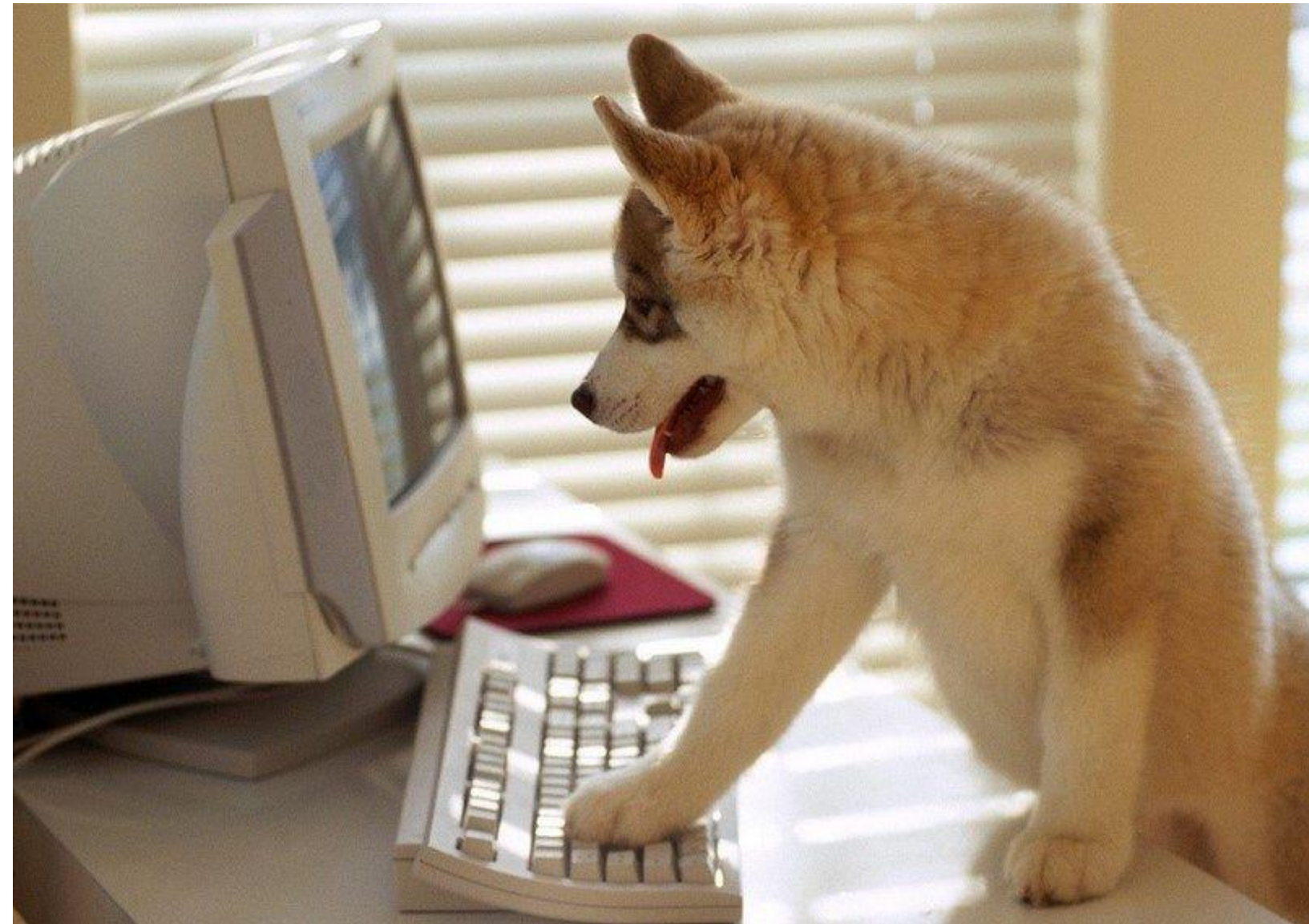


Programming Tutorial [Advanced]



Intent Services

Thread = *“the smallest sequence of programmed instructions that can be managed independently by a scheduler, which is typically a part of the operating system.”* ([https://en.wikipedia.org/wiki/Thread_\(computing\)](https://en.wikipedia.org/wiki/Thread_(computing)))

Intent Services

In Android:

- UI Thread as foreground Thread (What you see on the screen)
- No heavy or blocking operations!

Intent Services

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Solution: Background Threads :)

Intent Services

You will find many solutions with `AsyncTask` online, but `AsyncTask` is deprecated!

<https://www.xda-developers.com/asynctask-deprecate-android-11/>

Therefore, we will learn the more recent solution for background execution:

Intent Services

Intent Services

```
public class MyIntentService extends IntentService{

    public MyIntentService(String name) {
        super(name);
    }

    public MyIntentService() {this("MyIntentService");}

    @Override
    protected void onHandleIntent(@Nullable Intent intent) {
        //ToDo
    }

}
```

Intent Services

```
public class MainActivity extends AppCompatActivity{  
  
    Intent intent = new Intent(MainActivity.this, MyIntentService.class);  
    intent.putExtra("someExtra", "blabla");  
    startService(intent);  
  
}
```

Intent Services

AndroidManifest.xml:

```
<service  
    android:name=".MyIntentService"  
    android:exported="false" />
```


Intent Services

Busy Waiting:

Bad:

```
int start = System.currentTimeMillis();
int current = start;
int duration = 5000;
while((current-start)<duration){
    current = System.currentTimeMillis();
}
```

Good:

```
try {
    Thread.sleep(5000);
} catch (InterruptedException e) {
    e.printStackTrace();
}
```

Android

In this course we will use Github Classroom

1. Get a Github Account if you don't have one
2. Go to: <https://classroom.github.com/a/xvogklnA> (or scan the QR Code with your phone)
3. Authorize Github and accept the assignment
4. Click on the repository

